

# Testing Different Types of Photographic Print Papers And Photographic Developers

Matching the “correct” developers with the different papers is one of the crucial aspects of image making. Taking in that all of the manufactured papers have their own “recommended” developers, the photographic experimenter can choose to mix or even make their own ‘special’ chemical developers. This will take testing and keeping notes of what works and what fails.

This “essay” deals in what I have done in finding developers to match the different papers I use for the making of paper negatives. However, my way is not the only way. Every photographic artist should do what works for them, and I very much encourage every photographic artist to do what they feel is best for them and their art.

Many trial and error attempts are made to find the look and “feel” that each artist will want to have with the creation of their work. Something that shall make the final work stand out and say to the viewer - This is the work of “so and so”. One look at a print from *Ansel Adams*, *Edward Weston*, or *Yousuf Karsh*, or *Annie Leibovitz* - one can tell the difference. The style, the look, and the subject matter is their “signature”.

The understanding of what and how photographic chemicals work to bring any photo into existence is crucial. However, a college degree in chemistry is not needed. Just the basic understanding of how these raw chemicals react to and with one another is all you will need. This information can be found in one book = ***“The Darkroom Cookbook” by Steve Anchell***. (I strongly advise, everyone interested in experimenting along these lines, get a copy of this great book.)

I suggest that the beginner to the chemical photographic process, begin with the manufactured developers that are available on the open market. It is easy to find the formula information on the internet with any “search engine”. Read about the raw chemicals and be familiar as to what they do, as well as the percentages of the weights that are added to water. (Sometimes it only takes a tenth of a gram to make a difference.) Also, the way that these chemicals are mixed into water. Most, if not all, of these chemicals must be added in the order as they appear in the recipe.

Most often only four 8X10 sheets of paper is necessary to find the correct developer needed for a particular paper. And is with a 4X5 inch camera. You will cut the 8X10 single weight paper into Four pieces = so now you have a total of Sixteen 4X5 sheets to make use of for your experimenting.

A Notebook (or even a “scratch-pad”) to write down what you are doing, is most necessary to keep track of what you are doing. (I also type the information onto the paper negative after scanning.) One can just “dump and go”, and hope that things come out well. However - this is NOT the best way. (I did something once where I did not take careful notes. The development outcome was very nice. However - because of my NOT keeping good notes I could never duplicate the exact amounts of chemicals used, and it is lost to time. That good developer can not be made again. I have come to call it “Damnitol” = (i.e.= Damn It All).

Paper = Polycontrast “F” RC - ISO= 6  
f-16 @ 3 Sec. Shutter  
Dev. ETHOL 1:8-DEKTOL 1:4 / 25 Seconds



*(Examples of The Negative with the scanned and inverted, edited, Positive)*

The paper negative, above, was developed in a combination of LPD - Ethol © with a dilution of 1:8 and Kodak Dektol © with a dilution of 1:4 mixture. The development time was that of 25 seconds / with regular Stop and Fixer. I really think that the time it took to develop this image was a little too short. (I prefer my development times to be between 1 Minute to 3 Minutes.) The chance that “chemical fogging” could occur is caused by too “heavy”, or strong, dilution. (I adjusted this from the usual mix by additional water of 1:3 of the working solution. The result was that the image came to full development in one and a half Minutes, with no fogging.)

Here are examples of the fogging of the image caused by “chemical burn”.

The actual tests that you shall do and the methods of which you may do them will be totally up to you, the experimenter.

Paper = Polycontrast "F" RC - ISO= 6  
f-16 @ 3 Sec. Shutter  
Dev. ETHOL-DEKTOL (Too Strong) 15 Seconds



*(The above paper negative, and the positive, is the result of "chemical fogging")*

This is an example of chemical fogging from a developer being too strong of a dilution. What is truly sad about this is that there is absolutely no corrective measures to take to correct this. = it IS what it IS. (I might add that the making of a contact print from a negative such as this would yield the same result, perhaps worse.)

The developer I used in these examples was the mix of two popular developers on the open market. It is very easy to do to get to know the dilutions and how they effect the negative outcome. After getting to know how these dilutions effect the negative, I made the decision to make my own from raw chemicals. It is a rather in-depth experimentation effort, but very rewarding when things go well. Sure there will be frustration in the failures - but that is how we learn.

All of the formulas given within "The Darkroom Cookbook" are meant to be 'tinkered' with. The success that happens with the experiments will come from the understanding of how each of the chemicals work to bring to life the image that you want. So - I stress that you know each chemical and the relation to one another.

Do keep in mind that "resin coated" papers develop about two times faster than that of "fiber based" papers. So - one dilution does not fit all. Almost all multi-contrast (variable contrast, poly-contrast) photo paper will develop in all of the paper developers on the open market and the formulas you read about for paper development will work. However.... Are these combinations of chemicals what you want? Do you feel that something is lacking in your pursuit of a total process of your style of (analog) chemical photography?

*(Below is an example of one developer I have used and readjusted.)*

Ansco 103

*(Thanks to John J. Cahill)*

Water at 125F/52C, --- 750.0 ml

|                                   |    |    |    |    |                                    |
|-----------------------------------|----|----|----|----|------------------------------------|
| Metol, --                         | -- | -- | -- | -- | 3.5 g (JK readjusted to 3.0 grams) |
| Sodium sulfite, anhydrous, --     | -- | -- | -- | -- | 45.0 g                             |
| Hydroquinone, --                  | -- | -- | -- | -- | 11.5 g                             |
| Sodium carbonate, monohydrate, -- | -- | -- | -- | -- | 78.0 g                             |
| *Potassium bromide, --            | -- | -- | -- | -- | 1.2 g (JK readjusted to 1.6 grams) |

Water to make 1.0 liter

*\* For coldest tones, use 0.6 grams of bromide (6.0 ml of a 10% bromide solution) and add 25.0 ml of a 1% benzotriazole solution. The small amount of bromide will help maintain consistent print color.*

*For a "Working Solution -- Dilute 1:2. (JK readjusted to a 1:4)*

With the readjustments made to this particular developer I have made it work better for the paper that I use. (*Just now = Kodak Polycontrast II RC* ©) The preferred developer is usually Kodak Dektol ©. (Remember that the print photo paper you are using as a "film base" will develop differently in the camera than projection through an enlarger, thus, greater dilutions shall be necessary.) ((And about that enlarger vs camera "thing" - Yes I meant that remark. The light emitted from the lamp of the enlarger is very much dimmer than that of the reflected sunlight of the outside day. So - the dilution factor must be readjusted.))

The readjustments to the developers from a "normal" print to that of a paper to be used as a paper negative, is almost a must do. However - as I wrote before - this practice is for what I do to make my photographic image paper negatives, every photographer that is an experimenter will have their own way. So - If you feel that you might have a different and better way - Hey! = Go For It.

Thank you again for the reading of this [PDF].

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